

INNOVATION CONNECTION

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U.S. Department of Transportation
Federal Highway Administration

Sharing Success Stories from the
Turner-Fairbank Highway Research Center

September 2000

Are You Smarter Than A Truck?

July 19th was a day of reckoning for many this summer at the Intelligent Vehicle Initiative (IVI) demo in McLean, Virginia, where mere mortals were faced with a most perplexing dilemma. Set before them was the loaded question: Are you smarter than a truck? A car? Perhaps, a bus? Dare we say a snowplow?

The rather humbling news is in. Studies show that the number one cause for collision is driver error. At Turner-Fairbank, participants were able to test drive and experience for themselves these vehicles' Super hero-like powers with IVI demonstrations of rear-end collision avoidance, intersection collision avoidance, lane changing warning, adaptive cruise control, and night vision. Other super smart technology included the PERCLOS monitor, a dual eyelid tracking system designed to detect drowsy drivers and warn them of their deteriorating state. This event brought together TFHRC, the U.S. Department of Transportation's ITS Joint Programs Office and four agencies (Federal Highway Administration, Federal Motor Carrier Safety Administration, National Highway Traffic Safety Administration, and Federal Transit Administration), and the Society of Automotive Engineers in a collaborative effort with the big players of the car industry to kick off the first annual IVI meeting in the metro DC area to advance the marketing of technology products. These products can alert drivers of hazards on the road, recommend a safe course of action, and potentially even take over partial control of the vehicle to avoid collisions. [Shahed Rowshan, 202-493-3484]

TIN Is FHWA's New Heart

The Technology and Innovation Network (TIN) is not a tinman at all. In fact, it has a heart. And it is at the heart of FHWA's guiding principle of leveraging technology and innovation. As the "point of contact" for each business unit, the mission of TIN's members is to recommend strategies for technology deployment, identify priorities and needs, share information about good practices, and communicate more effectively the R&T "story."

TIN members will represent their units in the process of developing the Technology & Innovation Management Plan. They will serve as "two-way communicators," first, by reporting to the TIN group on their unit's technology and innovation progress, and second, by reporting TIN's strategies back to the unit leaders so that successful technology and innovation practices can be shared throughout FHWA. TIN is

currently seeking representation and input from the Division Offices, the "front lines" of FHWA's technology deployment efforts.
[John McCracken, 202-493-3422]

Orlando Combats Mean Streets with Weapon from FHWA

Orlando is now equipped with the just-released version of the Federal Highway Administration's PBCAT (that's short for Pedestrian & Bicycle Crash Analysis Tool). The Orlando metropolitan area embarked on a crusade to lose its recent title as the most dangerous pedestrian area in the Nation once it was discovered that Mickey and Minnie Mouse could no longer safely cross the street outside the Magic Kingdom. That title was announced by the Surface Transportation Policy Project in its take-no-prisoners report, **Mean Streets 1998**. In efforts to regain its image, Orlando put PBCAT to work analyzing crashes that occurred between 1993 and 1997. In addition

to advising Orlando on how to target speeders, PBCAT has helped to identify specific physical changes that can be made to improve ten hot spots in the metro area that accounted for 169 crashes and 22 fatalities in 1998. PBCAT is available for use in your mean streets by registering at www.walkinginfo.org/pbcats. [Carol Tan Esse, 493-3315]

Who Wants To Be A Safety Knight?

Once upon a time, knights of old protected the helpless from harm, just as today's safety researchers shield the motoring public from possible death and injury....The times have changed, but the need for knights has not.

And so begins the story of how the Office of Safety R&D brought the latest game show craze to McLean. The Office of Safety's idea to hold "Who Wants To Be A Safety Knight?" proved to be a successful way to share information in a fun, informal setting for the new inter-office meetings.

Based on the popular TV game show "Who Wants to be a Millionaire?," "Who Wants to Be A Safety Knight?" chose the first five people who answered preliminary test questions correctly to participate in the game.

A moderator led the panel through a series of questions ranging from easy to Safety Knight status that were projected onto a large, overhead screen. With four to five answers to select from, contestants were permitted three lifelines to ask the safety-wise audience for help as well as the option of "50/50." Questions ranged from the familiar "The vans in the TFHRC parking lot with the large periscopes on their roof are used for: A) Measuring sign retroreflectivity, B) Imaging aggressive drivers, C) Looking around trucks or D), Sensing traffic speeds" to the more scientific. (Answer: A). Interspersed between game times, special presentations included the National Crash Analysis Center, Roundabouts, the Human Factors Projects, crash simulations, crash data, and the Interactive Highway Safety Design Model (IHSDM).

Grand-prize winner Ernie Bastian won the five-person face-off by answering the most questions correctly and claimed the title of not only Safety Knight but Employee of the Month, which granted him the exclusive use of the reserved spot in front of the Turner-Fairbank buildings for the entire month of May. [Martin Hargrave, 493-3311]

Round and Round You Go

Simple circular intersections called roundabouts have been used in Europe for years, but are just now making a comeback in the U.S. thanks to the development of design standards published in FHWA's *Roundabouts: An Informational Guide* (Publication No. FHWA-RD-00-067). Since the use of roundabouts prevents left-turn, head-on, and right angle collisions, crashes tend to not be as severe. Studies based on experience in the U.S. show that roundabouts not only get you where you are going more efficiently, but reduce the total number of crashes by 37 percent while reducing crashes with injuries by 51 percent. To get your own copy of the guide, go to the Web at www.tfhrc.gov/safety/00068.htm. [Joe Bared, 202-493-3314]

People & Places

A la Arens

TFHRC's Photometric and Visibility Laboratory has been renamed the **Arens Photometric and Visibility Laboratory** by FHWA Administrator Kenneth Wykle in honor of John Arens, who recently retired after more than 20 years of service to FHWA. John was the laboratory manager until his retirement. [Carl Andersen, 202-493-3366]

Buckled Up Good

Recently all vehicle drivers and passengers entering TFHRC were checked for **seat belt usage**; 93 percent were buckled up. Good work! [Brian Kerr, 202-493-3000]

Blood Flows at Turner-Fairbank

Turner-Fairbank is not only helping to improve transportation, but it is improving the lives of its neighbors as well. On August 1, 2000, 21 employees from a "good mix" of departments let the blood flow to benefit the American Red Cross Quarterly Blood Drive. Blood Drive Coordinator, **Judy Dakin**, hopes for a bigger turn-out for the **next blood drive, on December 5th**. Judy was named "Employee of the Month" for August in appreciation of all of her hard work. This is just another example of how FHWA is making a positive impact in the greater community. [Judy Dakin, 202-493-3192]